STATE OF NEVADA
Department of Conservation & Natural Resources
DIVISION OF ENVIRONMENTAL PROTECTION
Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
Colleen Cripps, Ph.D., Administrator

FACT SHEET

(pursuant to NAC 445A.236)

Applicant: ORNI 39 LLC
6225 Neil Road
Reno, NV 89511

Permit Number: UNEV2012202

Project Name: McGinness Hills Geothermal

Facility Location: 10 miles northeast of Austin, Nevada
65 Box 500
Austin, NV 89310, Lander County

Permitted Injection Wells (#): Four (4)

Injection Well Locations:

58B(O)-22:
Latitude: 39° 34' 31.0" N
Longitude: 116° 54' 3.8" W

58B(P)-22:
Latitude: 39° 34' 31.2" N
Longitude: 116° 54' 3.8" W

66B(P)-22:
Latitude: 39° 34' 43.8" N
Longitude: 116° 54' 0.5" W

61-22:
Latitude: 39° 35' 19" N
Longitude: 116° 53' 9.7" W

General: Ormat Nevada, Inc., through its subsidiary ORNI 39, proposes to construct, operate, and maintain the McGinness Hills Geothermal Development Project in Lander County, Nevada. The project is located on both public lands administered by the Bureau of Land Management (BLM), Mount Lewis Field Office, and private lands leased by Ormat. The geothermal project includes the construction and operation of the following: a 33 megawatt (MW) (net), 45 MW (gross), binary, air-cooled geothermal power plant; geothermal production and injection well pads and wells; geothermal production and injection pipelines; and ancillary facilities. Ormat anticipates that construction of the facility will be completed by April 2012, and startup of the plant will begin shortly thereafter. If the geothermal resource is found to be sufficient, the facility may be expanded in the future to include a second phase that would be similar in capacity to the first phase.

The power plant will be based on the Rankin cycle, in which an organic motive fluid absorbs heat from the geothermal water (brine), causing the motive to vaporize. Brine

will be pumped from the wells, through the heat exchanger and then back into the subsurface reservoir on the opposite side of the field. Brine will not be exposed to the atmosphere or directly to the generating equipment.

Injection Characteristics: Three injection wells (58B(O)-22, 58B(P)-22 and 66B(P)-22) will initially be used for injection at the McGinness Hills Facility. A fourth injection well (61-22) is included in the permit; however, there are no immediate requirements for this well and it has not been approved for injection. Individual injection wells are expected to receive an average of approximately 4333 gallons per minute (gpm) of 150°F geothermal fluid. The McGinness facility will be air-cooled and no cooling tower water blow down will be produced or require injection. The production and injection wells have shown to be similar in geothermal temperature and chemistry. Analysis of the production zone indicates that the injectate will have the following average constituent values: boron - 1.4 mg/L, fluoride – 10.5 mg/L, arsenic - 0.08 mg/L, and chloride - 28 mg/L. The injectate will contain minor quantities of both lubricating fluids from production well pumps, and scale inhibitors used to prevent deposits from restricting the output of the binary heat transfer in the heat exchangers. The addition of lubricating fluids and scale inhibitors are standard practices for this type of facility and has been approved by the division.

The following table outlines injection well information:

Table 1: Injection Well Information

Injection Well No.	Date Well Completed	Max Wellhead Pressure (psig)	Total Depth/ Casing Shoe of Well (ft)	Depth to Injection Interval (ft)
58B(0)-22	11/17/09	539	2467 / 1832	1850
58B(P)-22	3/11/10	562	2580 / 1911	1990
66B(P)-22	7/14/10	504	2031 / 1713	1800

Receiving Water Characteristics: The production wells are in a direct hydraulic connection will the injection wells located two miles away on the southern border of the property. The geothermal reservoir consists of a large area of high permeability and temperatures above 300°F. Analysis of the receiving zone indicates the following average constituent values: boron - 1.4 mg/L, fluoride – 13.1 mg/L, arsenic - 0.08 mg/L, and chloride - 28 mg/L.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the Schedule of Compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications that the Administrator may make in approving the Schedule of Compliance.

Rationale for Permit Requirements: The permit conditions will help to ensure that the injectate does not adversely affect the existing water quality or hydrologic regime.

Procedures for Public Comment: The Notice of the Division's intent to issue a permit authorizing the facility to inject into the groundwaters of the State of Nevada subject to the conditions contained within the permit is being sent to the **Eureka Sentinel** and the **Reno Gazette Journal** for publication. The notice is also being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail or time-stamped faxes, e-mails, or hand-delivered items) to the Division is **5:00 PM, February 27, 2012.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator EPA Region IX or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination: The Division has made the tentative determination to issue the proposed permit for a period of five (5) years.

Prepared by: Jason Ferrin, E.I.
Bureau of Water Pollution Control
January 2012